

# NDIR i-C<sub>4</sub>H<sub>8</sub> SENSOR MODULE

# DATASHEET

LARK-1ZHR i-C<sub>4</sub>H<sub>8</sub> 10000PPM| Order NO.: 001-0805-J04



## Parameters

Principle	NDIR
Range	0 ~ 10000 ppm i-C <sub>4</sub> H <sub>8</sub>
Sampling Mode	Pumping
Response Time	≤ 5 s (@500 ml/min)
Recovery Time	≤ 5 s (@500 ml/min)
Long-term Stability*	≤ ±400 ppm/month
Temperature	-20 °C ~ 50 °C
Tolerance	±100 ppm @20 °C (≤5000ppm) ±200 ppm @20°C (≤10000ppm)
Zero Temp. Drift	±400 ppm (Online Zero Calibration Available)
Resolution	40 ppm/sec
Reading Unit	ppm
Detection Limit	40 ppm

\*Long-term Stability: 28 days of zero drift measured in clean air of 0~90% RH, 0~35 °C

## Mechanics

Optic Path	Steel
Circuit Board	FR4 / Lead-free HASL
Solder	Sn / Ag / Cu
Mounting Plate	ABS

## Applications

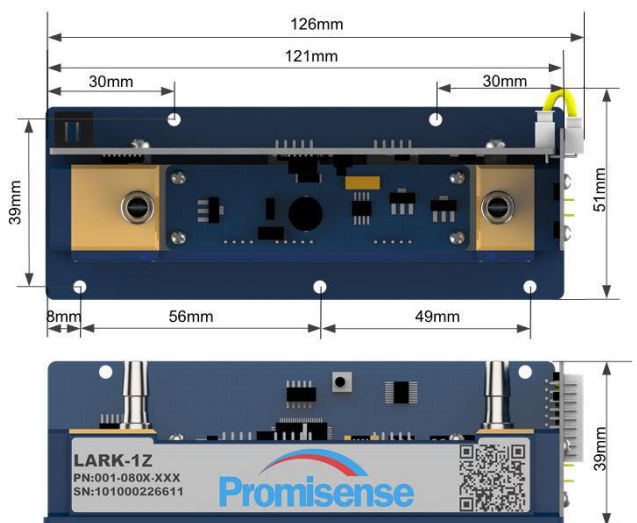
- Measurement of VOC
- Volatile Matter Measurement of HC

## Merits

- Low Detection Limit
- Wide Temperature Range
- Small Size
- Long Life
- Fast Response

## Dimensions

- Length: 126 mm ± 1 mm
- Width: 51 mm ± 1 mm
- Height: 39 mm ± 1 mm
- Weight: 220 g ± 5 g
- Screw Hole Diameter: 3 mm



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## Electrical Parameters

Input Voltage	9 ~ 24 VDC (#9 pin)
Operating Current	< 0.15 A @9 VDC
Power (w/o heating)	< 1.0 W for Average < 1.5 W @ Peak
Optical Heating Voltage	+5VDC
	Power < 4W
Warm-up Time	3 minutes (Tolerance $\pm 400$ ppm) 60 minutes (Tolerance $\pm 100$ ppm)
Output Voltage	0.4 ~ 2.0 VDC (#2 pin) (0.3 ~ 0.4 V for Negative Reading)
Warranty	18 months*

## Application Condition

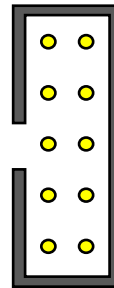
Prefer Condition	Room Temperature, Dry, Clean
Safety	None Explosion-proof Design
Temperature	-20 °C ~ 50 °C
Humidity	0% RH ~ 85% RH (No Condensation)
Flow Rate	< 3.5L/min
Pressure	0.5 ~ 2.0 ATM (Ambient air pressure measured, without pressure compensation)

### \*Non-warranty Case:

- Polluted by condensation, water or dust; Dust and water removing is strongly suggested;
- Damaged by falling, hitting, disassembling, etching or over-loading;
- Label has been torn.

We reserves the right to modify this datasheet and will optimize the product in the future. If you use this product for specific application, please contact us for more technical support.

## Connector Definition



1.ALM	2.V <sub>out</sub> (DAC)
3.RXD(TTL)	4.TXD(TTL)
5.RXD(RS232)	6.TXD(RS232)
7.CS1*	8.GND
9.PWR DC	10.GND



\*CS1: 0-3.3 VDC Output, for RS485

## Accessory

### Tygon Tube

- Length 50 mm × 2
- Diameter 3.2 mm × 6.4 mm
- Polyethylene, Transparent

### Ribbon Cable

- Length 200 mm × 1
- 10-pin, 28 AWG, Gray
- Female Connector, 2 × 5
- 2.54 mm Pitch